CHAPTER 24

Testing and Validating Your HTML

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With the structure of your page in place, you need to make sure it runs on all browsers. This chapter tells you how to make sure that your HTML is valid and renders properly. You will also discover common HTML mistakes, how to test your HTML, and how to validate your HTML on the Web using free software.

Watch for These Common HTML Mistakes

If you manage to avoid these common HTML mistakes, you have completed 80 percent of the steps needed for a valid HTML page. The most common HTML mistakes are

- **Failing to complete a tag.** Do all your elements have the necessary end tags? This element is particularly important for inline elements, such as bold and italics.
- **Failing to include a forward slash (/) in an end tag.** You may think you included an end tag, but the browser may see another start tag instead. Your browser isn't smart enough to figure out that the second occurrence of <B> in your paragraph should have been </B>.
- **Failing to close a comment.** If you fail to close a comment, everything after the comment's start tag disappears from your screen.
- **Improper nesting of tags.** This element won't always be a problem, but as more elements are added to HTML, browsers will get pickier. From now on, only publish pages with proper nesting so you won't have to fix those pages later.

- **Missing end quotation marks.** This mistake is tough to catch. If you don't close your quotation marks carefully, your browser thinks that the URL is another element.

Testing Your HTML

Check your HTML as you go by using an HTML editor that uses tag coloring. If you can see the color of your tags, you can tell whether you have completed all your tags and comments. After getting comfortable with a tag-coloring HTML editor, you will find it invaluable.

Chapter 8 introduced several HTML editors.

To test your HTML code, load your page into your browser. Just because your page looks great in your browser doesn't mean it looks great in every browser, however. Testing your HTML requires adherence to some guidelines. If you publish your page for access by anyone with any kind of browser from any platform, you want make sure it works properly for each configuration. Start with the checklist in Table 24-1.

Table 24-1
Guidelines for Testing Your HTML

Test from the most recent version of:
❑ Netscape Navigator
❑ Internet Explorer
❑ The AOL browser
Test from the previous version of:
❑ Netscape Navigator
❑ Internet Explorer
❑ The AOL browser
Test from all platforms:
❑ Windows 95/98/00/NT
❑ Windows 3.1
❑ Mac O/S
❑ UNIX platforms

Test with screen resolution set to:
❑ 640×480
❑ 800×600
❑ 1024×768

If your server is Windows NT/2000, test from a machine in which you are logged on as another user, so that the security information is not passed through.

Why You Should Validate

Because you can't catch everything and your page's appearance will vary in different browsers, you should also validate your HTML.

What is validating?

Validating submits your HTML to rules-checking. You can validate your HTML with software residing on your computer or the Web. When you validate your HTML, the validator returns listings of all the places in your page where your HTML does not comply to its rules. Many validators are available; if you build lots of pages, you'll probably want to purchase one that sits on your desktop. If you own an HTML editor, it may come with its own internal validator.

Definition

Validating. Checking your HTML with software to identify where you have failed to close tags, improperly nested tags, and broken other syntax rules that may affect how your page renders; also sometimes making sure that your site complies with the specifications for speech-synthesizing sites.

Why validate?

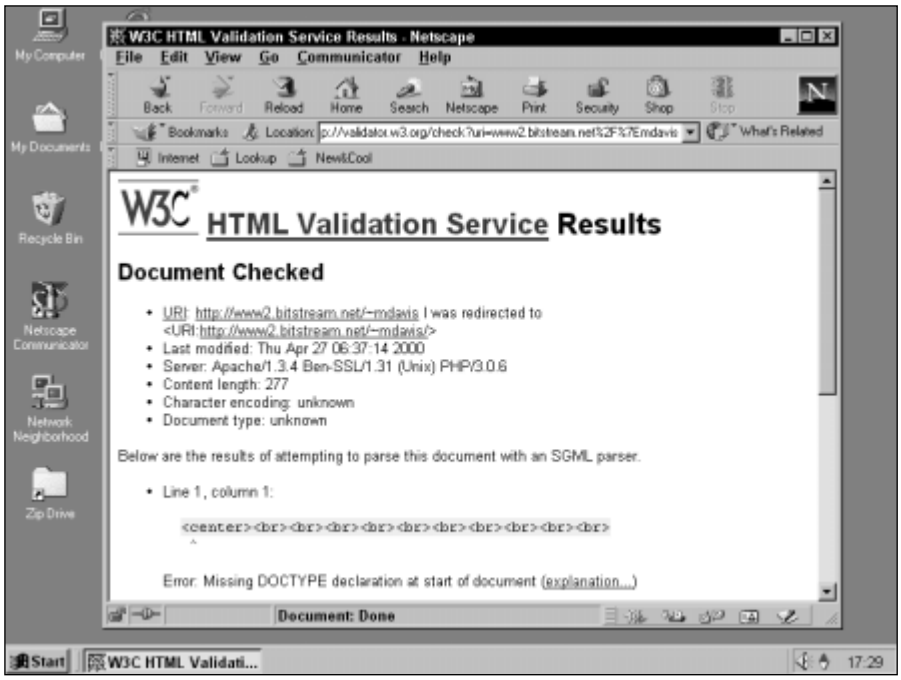
Although you create your page carefully, you should expect some mistakes to occur. HTML validating can help you

1. Find blatant HTML errors (such as the errors listed in the section, "Watch for These Common HTML Mistakes," found earlier in this chapter). Validating also finds misspellings in tags or attributes.
2. Find out whether your page complies with your rules.
3. Find out if any parts of your page are difficult to render in speech-synthesizing browsers or Braille browsers.
4. Find out whether your page works with all major browsers.

Validating Your HTML

Many free validation services are available on the Web. Some of these free validators check your HTML syntax, while other support HTML 4.0's hexadecimal character references. One site where you can immediately validate your HTML, instead of downloading a Perl script, is the W3C's validator (see Figure 24-1). Although the service is a bit verbose, it not only points out problems with your HTML but also suggests corrections (such as entity numbers).

You can find the W3C's validator on their Web site at `http://validator.w3.org/`.


W3C HTML Validation Service Results - Netscape
File Edit View Go Communicator Help
Back Forward Reload Home Search Netscape Print Security Shop Stop
Bookmarks Location: p://validator.w3.org/check?uri=www2.bitstream.net%2F%7Emdavis What's Related
Internet Lookup New&Cool
W3C HTML Validation Service Results
Document Checked
URI: http://www2.bitstream.net/~mdavis I was redirected to <URI:http://www2.bitstream.net/~mdavis/>
Last modified: Thu Apr 27 06:37:14 2000
Server: Apache/1.3.4 Ben-SSL/1.31 (Unix) PHP/3.0.6
Content length: 277
Character encoding: unknown
Document type: unknown
Below are the results of attempting to parse this document with an SGML parser.
Line 1, column 1:

Error: Missing DOCTYPE declaration at start of document (explanation...)
Document: Done
My Computer
My Documents
Recycle Bin
Netscape Communicator
Network Neighborhood
Zip Drive
Start
W3C HTML Validati...
17:29

Figure 24-1: The W3C HTML validator gives helpful, if verbose, results.

What should you expect from HTML validation? (Validation may be built into your HTML editor, so you may not have to go too far to find out whether your code is compliant.) The following list describes some expected services:

- A list of errors in your HTML
- A list of any open quotes without closure

- A list of nesting problems (usually listed as warnings, not as errors)
- A list of any place you used characters instead of entities (such as putting a > in your document)

Validating Your CSS

When you use a Cascading Style Sheet, there is less room for error in your plain HTML code. There doesn't seem to be much difference between validating your CSS and validating your Web page.

Why would you want to validate your CSS? Well, mostly for the same reasons you would validate your Web page. If you don't validate your CSS code, you run the risk of your page not displaying as you intend on different browsers. There are complaints about bugs in browsers, when in reality the problem is probably caused by an incorrect CSS syntax that another browser accommodates, despite being incorrect. Internet Explorer is particularly forgiving when it comes to invalid style sheets. If you usually test your Web pages with IE, you might get some surprises when you view the page in another browser that supports CSS.

The most common example is leaving units off values. For example the following rule is invalid CSS. Browsers should ignore it.

```
H1 {margin-left: 12}
```

This specifies that the left margin for <H1> elements should be 12, but 12 what? It isn't specified; thus, this is invalid, and should be ignored. Netscape ignores it, but Internet Explorer eagerly treats this as 12 pixels. Often HTML writers consider Netscape buggy, when in fact it is behaving correctly by following the standard.

Short of knowing the specification, how can we ensure that our style sheets are valid? Validate them! There are a couple of ways to validate your CSS pages. There are downloadable validators, which run on your computer; validators built in to HTML editors; and finally, online validators that allow you to enter your URL, or paste your page into them.

There are two popular online validators that will help ensure that your CSS is valid, and will warn you about problems. Just as in validating your HTML, the W3C Web page is invaluable. The two validators can be found at

- `http://jigsaw.w3.org/css-validator/`
- `http://htmlhelp.org/tools/csscheck/`

To use these sites, go to the page and enter the URL you want validated.

Different ways of validating your CSS

There are three levels of validation: strict, loose, and frameset. The strict variant excludes all presentational markup (such as `<font>` elements), while loose (or transitional), includes these elements. Frameset does what its name implies, which is including support for frames.

You should always try for strict validation. Then you'll be ready for future iterations of HTML. Depending on the validator you use, the approach is slightly different.

First, you need a way of telling the validator which DTD you are validating against. You do this by adding a link above the head of your HTML document. Examples follow for the three levels.

Strict

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01//EN" "http://www.
w3.org/TR/html4/strict.dtd">
```

Loose

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/loose.dtd">
```

Frameset

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Frameset//EN"
"http://www.w3.org/TR/html4/frameset.dtd">
```

Use the strict DTD if your page contains no presentational markup, and the frameset DTD if your pages has frames; otherwise go ahead and use the loose DTD. But, as recommended above, for the most accurate validation, the strict level should be used most of the time.

After you enter the DTD information in your HTML page, you can copy your page and go to `http://htmlhelp.org/tools/validator/`. Paste your code into the validator and it will return errors and/or warnings if they are found.

Assessing Usability

You have a beautifully designed page that now — thanks to the time you took to validate the HTML — complies with the DTD. But how long does it take to download? Will it work on every browser? How will speech-synthesizing browsers handle it?

Part of the impetus of the HTML 4 push for moving formatting out of the page is to increase the distribution of Web sites to nontraditional browsers, such as speech-synthesizing browsers and Braille browsers.

A wonderful service available on the Web, called Bobby (`www.cast.org/bobby/`), reviews your HTML just like a validator. Instead of returning a list of errors, however, it returns a list of places where you can make changes to your page to increase its usability by nontraditional browsers (see Figure 24-2). Bobby can also point out any rendering problems for your page in different browsers. Finally, Bobby calculates your page's download time along with other download statistics.

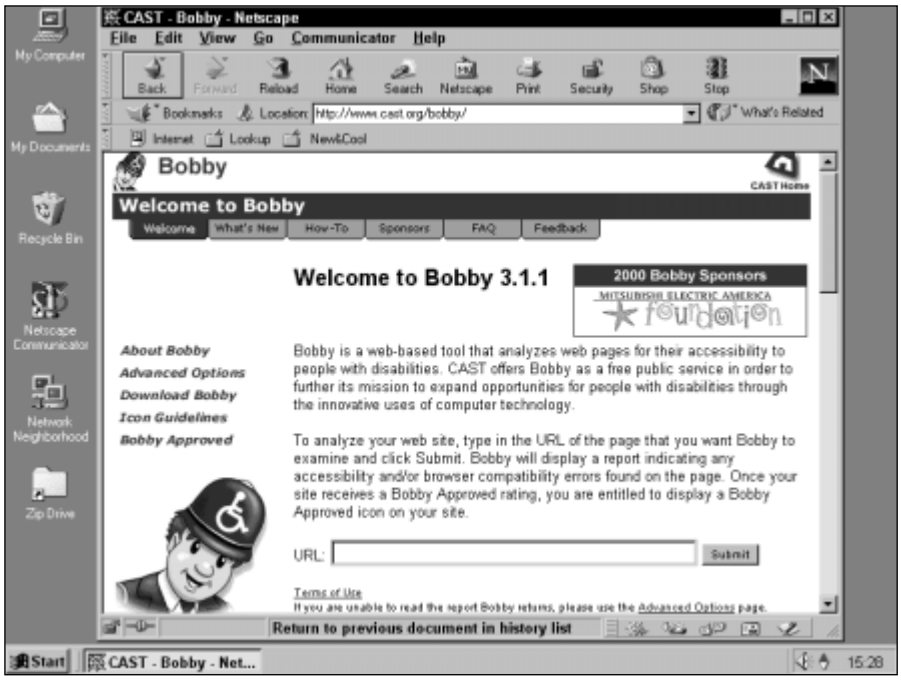

CAST - Bobby - Netscape
File Edit View Go Communicator Help
Back Forward Reload Home Search Netscape Print Security Shop Stop
Bookmarks Location: http://www.cast.org/bobby/ What's Related
Internet Lookup New&Cool
Bobby
CAST Home
Welcome to Bobby
Welcome What's New How-To Sponsors FAQ Feedback
Welcome to Bobby 3.1.1
2000 Bobby Sponsors
MITSUBISHI ELECTRIC AMERICA
foundation
About Bobby
Advanced Options
Download Bobby
Icon Guidelines
Bobby Approved
Bobby is a web-based tool that analyzes web pages for their accessibility to people with disabilities. CAST offers Bobby as a free public service in order to further its mission to expand opportunities for people with disabilities through the innovative uses of computer technology.
To analyze your web site, type in the URL of the page that you want Bobby to examine and click Submit. Bobby will display a report indicating any accessibility and/or browser compatibility errors found on the page. Once your site receives a Bobby Approved rating, you are entitled to display a Bobby Approved icon on your site.
URL:
Submit
Terms of Use
If you are unable to read the report Bobby returns, please use the Advanced Options page.
Return to previous document in history list
Start
CAST - Bobby - Net...
15:28
My Computer
My Documents
Recycle Bin
Netscape Communicator
Network Neighborhood
Zip Drive

Figure 24-2: Use Bobby to evaluate your HTML and your Web page's usability.

From Here

Jump to Chapter 44 to learn about delivering content via push technologies.

Proceed to Chapter 25 and dive into Cascading Style Sheets (CSS).

Summary

This chapter covered the fundamentals of testing and validating your HTML. You learned about resources for validating your HTML on the Web. You learned the most common HTML mistakes, how to check and test your HTML, and why you should validate. You also learned about assessing the usability of your HTML with the Bobby service.